

CASE 5

Level of
Therapeutic
Difficulty:

3

Congestive Heart Failure; Prior Myocardial Infarction; Economic Considerations of Care in Medicare Population

J. Doug Wurtzbacher, PharmD; Greta A. Gourley, PhD, PharmD; William C. Cushman, MD; David Fine, MHA; Jerry Miller, MD; Rita Shane, PharmD, FASHP; and Kathryn Schultz, PharmD

▼ CASE 5 SCENARIO

Patient and Setting:	BV, a 68-year-old Asian-American female; family practice clinic
Chief Complaint:	Shortness of breath while walking; wakes up 2 times a night short of breath; joint pain
History of Present Illness:	C/O increasing joint pain over the past 6 weeks; ran out of medications 3 weeks prior to clinic visit; increasing DOE for 3 weeks and PND 2 times a night for 1 week; receives most of her medications as samples from 2 different physicians at the clinic
Past Medical History:	Osteoarthritis for 20 years; CHF for 2 years; MI, 3 years ago
Past Surgical History:	Hysterectomy at age 42
Family/Social History:	Retired housekeeper at local motel; divorced; lives alone; receives Medicare benefits – no coverage for prescription drugs; never smoked; occasional beer 1 to 2 times per month; high-sodium diet including soy sauce; mother, hypertensive, died at age 68 of stroke; father, CAD, MI at age 38, died at age 54 of second MI
Medication History:	Received samples from the clinic over the past 4 months: torsemide 10 mg tab po qd; oxaprozin, diclofenac 75 mg tab po qd; perindopril, eprosartan, amlodipine 5 mg tab po qd; omeprazole 20 mg cap po qd; regularly purchases from the pharmacy: digoxin 0.125 mg tab po qd
Allergies:	NKDA

Physical Examination:

GEN: WN WD obese Asian-American female; AO x 3; mildly short of breath
 VS: BP 180/104; HR 115; RR 22; Ht 157 cm (5'2"); Wt 79 kg (174 lbs) (BMI 32)
 HEENT: Benign
 COR: Tachycardic; regular rhythm with occasional premature beats; S3; no JVD
 CHEST: Bibasilar rales; no wheezes
 ABD: Obese; no masses, organomegaly, tenderness, AAA, or bruits
 GU: Not performed
 RECT: Hemoecult (-)
 EXT: Normal pulses, 2+ pitting edema
 NEURO: (-)

Results of Pertinent Laboratory Tests, Serum Drug Concentrations, and Diagnostic Tests:

Na: 132
 K: 5.2
 CL: 102
 CO₂: 28
 BUN: 30
 SCr: 2.0
 Glu: 110
 Hgb: 12
 Hct: 38
 LDL: 100
 HDL: 45
 TG: 220
 Digoxin: Undetectable
 UA: 3+ protein otherwise normal
 EF: Unknown

▼ Case 5 SOAP NOTE

CASE 5 PROBLEM LIST

S: _____

1. _____

O: _____

A: Problems:

2. _____

1. _____

3. _____

2. _____

4. _____

3. _____

5. _____

4. _____

6. _____

5. _____

6. _____

7. _____

7. _____

P: Problem 1: _____

- _____
- _____
- _____
- _____
- _____

Problem 2: _____

- _____
- _____
- _____

Problem 3: _____

- _____
- _____
- _____
- _____

Problem 4: _____

- _____
- _____

Problem 5: _____

- _____
- _____
- _____
- _____

Problem 6: _____

- _____
- _____
- _____
- _____

Problem 7: _____

- _____

CASE 5 QUESTIONS

1. The most probable cause for BV's CHF exacerbation is: (EO-1)

- a) Use of omeprazole
- b) Discontinuing digoxin
- c) Use of torsemide
- d) Her obesity

**2. The mechanism of action of fosi-
nopril is: (EO-7)**

- a) It competitively blocks the conversion of angiotensin-I to II
- b) An increase in preload and afterload
- c) Direct arteriolar vasoconstriction
- d) Indirect vasoconstriction of venous capacitance vessel

**3. The use of fosi-
nopril in a patient
with renal insufficiency may: (EO-6)**

- a) Lead to elevated potassium levels
- b) Lead to increased sodium loss
- c) Exacerbate shortness of breath
- d) Reduce digoxin levels

4. BV appears to have drug-induced renal insufficiency. This may be due to which one of her medications? (EO-10)

- a) Amlodipine
- b) Diclofenac
- c) Omeprazole
- d) Eprosartan

5. Psychosocial factors that adversely affect BV's clinical management include: (EO-15)

- a) Lack of appropriate support system
- b) Access to medical care
- c) Occasional beer
- d) History of hysterectomy

6. Which of the following combinations associated with BV's previous medication history would be considered a drug-drug interaction? (EO-9)

- a) Diclofenac and perindopril
- b) Omeprazole and torsemide
- c) Amlodipine and eprosartan
- d) Amlodipine and oxaprozin

7. How might BV's drug regimen be modified to improve CHF management? (EO-8,12,17)

- a) Increase dose of torsemide and discontinue all other medications
- b) Increase dose of amlodipine and perindopril and discontinue all other medications
- c) Reinstitution digoxin, initiate furosemide and fosi-
nopril, and discontinue all other medications
- d) Restart perindopril and eprosartan

8. CHF is characterized by which of the following: (EO-3)

- a) 10,000 new cases per year in the United States
- b) Frequently requires hospitalizations in the elderly
- c) Five-year mortality rate is 90%
- d) Is not frequently associated with hypertension

9. Which one of the following ACE inhibitors is cleared by both renal and hepatic routes? (EO-6)

- a) Fosi-
nopril
- b) Benazepril
- c) Lisinopril
- d) Enalapril

10. Which of the following considerations should be evaluated when planning BV's regimen? (EO-17,18)

- a) Prior history of hysterectomy
- b) Prior employment history as a housekeeper
- c) Occasional social alcohol intake
- d) Lack of prescription benefit

See test forms on page S162.